genus. Gill-rakers very short. Pseudobranchiæ large. Gill-membranes in one specimen united and wholly free from the isthmus; in the others joined as usual in *Cyprinidæ*. The condition in the first specimen is doubtless abnormal. Pharyngeal bones and teeth as in the other species of the genus; the teeth 2, 4–5, 2, slender, hooked, without grinding surface.

Scales 17–90–9, those on the back and belly rather smaller than the others, those on the breast imbedded. Lateral line very strongly decurved, its lowest point scarcely above the line of insertion of the pectoral fins.

Dorsal fin inserted at a point midway between eye and base of caudal, a little behind the insertion of the ventrals. Caudal short and deep, not strongly forked, the lobes equal, the accessory rays not numerous. Pectorals not large, extending three-fifths the distance to the ventrals, which reach two-thirds the distance to the vent. Anal fin small. Dorsal rays I, 8; anal I, 7.

This species reaches a length of nearly 3 feet. It is brought into the markets of San Francisco in considerable numbers in the winter, in company with the closely related and still larger species *Ptychochilus oregonensis* (*Pt. grandis* Ayres), with which species it has been hitherto confounded. The latter species is, however at once distinguished by its larger scales, the usual number being 12–75–6. *Ptychochilus rapax* Grd. has the larger scales of *Ptychochilus oregonensis*, and the lateral line is represented as little decurved, the scales more loosely imbricated; and *Pt. lucius* Grd., from the Colorado River, is represented as having the scales still smaller than in *Pt. harfordi*, while "*Ptychochilus vorax* Grd." is not a member of this genus at all, but belongs to the group called *Gila*.

We have named this species for Mr. W. G. W. Harford, curator of the California Academy of Sciences, who has taken much interest in the development of the ichthyology of California, and to whom the National Museum has been indebted for many favors.

The typical specimens, four in number, are entered as No. 27246 on the Museum Register. The largest one is about 18 inches in length, the others a little smaller. They were obtained by the writers in the San Francisco market, and were taken in the Sacramento River.

United States National Museum, *January* 5, 1881.

NOTE ON RAIA INORNATA.

By DAVID S. JORDAN and CHARLES H. GILBERT.

Four species of the genus *Raia* are known from the Pacific coast of the United States. One of these was described by Girard, under the name of *Raia binoculata*, in the Proc. Acad. Nat. Sci. Phila., 1854, p. 196, and later under the name of *Uraptera binoculata*. The description con-

tains little that is characteristic, and the typical example seems to be lost. We have, however, no doubt that it was based on a young individual of the large skate called by us, on page 252 and elsewhere in these Proceedings (Vol. III), *Raia cooperi*. The presence of the single spine on the median line of the back anteriorly, as described by Girard, is one of the most constant diagnostic characters of the young of this species, and we have never found less than three or four such species in the corresponding position in the species called by us hitherto *Raia binoculata*.

The *Raia cooperi* of Girard is based on a drawing by Dr. Cooper, and the great size is the only diagnostic character assigned to it. As three of the species reach a length of but 30 inches and the other a length of 6 feet, we have no difficulty in making an identification with the species described by us as *Raia cooperi* on page 252. *Raia binoculata* of Girard is thus probably the young of *Raia cooperi* of Girard. The large skate should therefore be called *Raia binoculata*, while the species described by us on page 134 of the Proceedings as *Raia binoculata* may receive the new name of *Raia inornata*.

Specimens of this species obtained at Santa Barbara represent a marked variety, distinguished by the small number and feebleness of the spines and prickles, and in the presence (in the females) of a band of small prickles on the posterior part of the pectorals, parallel with the edge. Suprocular spines almost obsolete. Two or three minute prickles often present on the median line at the shoulders. A series of minute stellate prickles beginning near the middle of the back, becoming hooked spines on the tail. Lateral caudal spines scarcely developed, even in the female. A band of small prickles on the posterior part of the back. Males almost smooth. Size and color as in *R. inornata*. This form may be known as var. *incrmis*.

United States National Museum, *January* 13, 1881.

ON THE FISH-MORTALITY IN THE GULF OF MEXICO.

By ERNEST INGERSOLL.

Sir: Pursuant to your verbal suggestion, I made it an object, during my recent cruise down the western coast of Florida in the service of the Superintendent of the Census, to inquire into the so called "poisoned water" which was supposed to have caused the remarkable mortality among the sea-fishes that occurred in the autumn of 1880. I am sorry to be able to give so meagre an account of the matter as follows; but must beg excuses on the plea that I was too late to see any actual destruction, since the cause had wholly disappeared previous to my arrival there, and also from the fact that I was unable to carry out my intention of going to Key West, where most of the fishermen live who suffered injury, and who could perhaps have furnished additional information.